

Amendments to the Claims

This listing of claims replaces all prior versions and listings of the claims in the application.

Listing of Claims

1. (currently amended) A component which is produced or processed by powder metallurgy and has at least one porous region, which is formed from an intermetallic phase or solid solutions or has a surface coating of this type, and at least one areal fluid-tight region, which is formed from a metal, a metal alloy, and the corresponding intermetallic phase or solid solution.

2. (original) The component as claimed in claim 1, wherein the fluid-tight region forms part of the outer shell of the component.

3. (original) The component as claimed in claim 1, wherein the fluid-tight region is surrounded by the porous region.

4. (currently amended) The component as claimed in ~~one of the preceding claims~~, claim 1 wherein the corresponding intermetallic phase or the solid solutions are ~~based on~~ selected from at least one of the four consisting of nickel, aluminum, molybdenum, tungsten, iron, titanium, cobalt, copper, silicon, cerium, tantalum, niobium, tin, zinc ~~or~~ and bismuth.

5. (currently amended) The component as claimed in ~~one of the preceding claims~~, claim 1 wherein at least the porous region is formed from nickel aluminide or is coated therewith.

6. (currently amended) The component as claimed in ~~one of the preceding claims~~, claim 1 wherein at least the porous region has a porosity and density which change in steps or gradually in the direction of the areal fluid-tight region.

7. (currently amended) The component as claimed in ~~one of the preceding claims~~, claim 1 wherein at least the porous region is formed from a metal or metal alloy of the corresponding intermetallic phase or solid solution.

8. (currently amended) The component as claimed in ~~one of the preceding claims~~, claim 1 wherein at least one passage or aperture is formed in the areal fluid-tight region.

9. (currently amended) The component as claimed in ~~one of the preceding claims~~, claim 1 wherein the areal, fluid-tight region has a density of over 96% of the theoretical density.

10. (currently amended) A process for producing ~~the component as claimed in claim 1 by powder metallurgy~~, a component which is produced or processed by powder metallurgy and has at least one porous region, which is formed from an intermetallic phase or solid solutions or has a surface coating of this type, and at least one areal fluid-tight region, which is formed from a metal, a metal alloy, and the corresponding intermetallic phase or solid solution wherein a starting powder which has a sintering activity and forms intermetallic phases or solid solutions is used to form the areal fluid-tight region.

11. (original) The process as claimed in claim 10 wherein a starting powder with a grain size $d_{50} < 50\mu\text{m}$ and a powder with a sintering activity obtained by high-energy milling are used for production.

12. (original) The process as claimed in claim 11 wherein a powder perform is produced from differentiated starting powders, the dimensions of which perform take account of the different shrinkages of the differentiated starting powders during sintering.

13. (currently amended) A process for producing ~~the component as claimed in claim 1,~~ a component which is produced or processed by powder metallurgy and has at least one porous region, which is formed from an intermetallic phase or solid solutions or has a surface coating of this type, and at least one areal fluid-tight region, which is formed from a metal, a metal alloy, and the corresponding intermetallic phase or solid solution wherein a porous structure, which forms the porous region, is coated with a powder which has a sintering activity and forms intermetallic phases or solid solutions, and the areal fluid-tight region is formed at a surface of the component by a subsequent sintering operation.

14. (currently amended) A process for producing ~~the component as claimed in claim 1~~ claim 1, a component which is produced or processed by powder metallurgy and has at least one porous region, which is formed from an intermetallic phase or solid solutions or has a surface coating of this type, and at least one areal fluid-tight region, which is formed from a metal, a metal alloy, and the corresponding intermetallic phase or solid solution wherein a metallic, areal and fluid-tight element, which forms the fluid-tight region, is coated with a layer of a powder which contains at least one element of the intermetallic phase or solid solution, and the fluid-tight region is joined to a porous structure, which has been placed on top of the powder layer and forms the porous region, by sintering.

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